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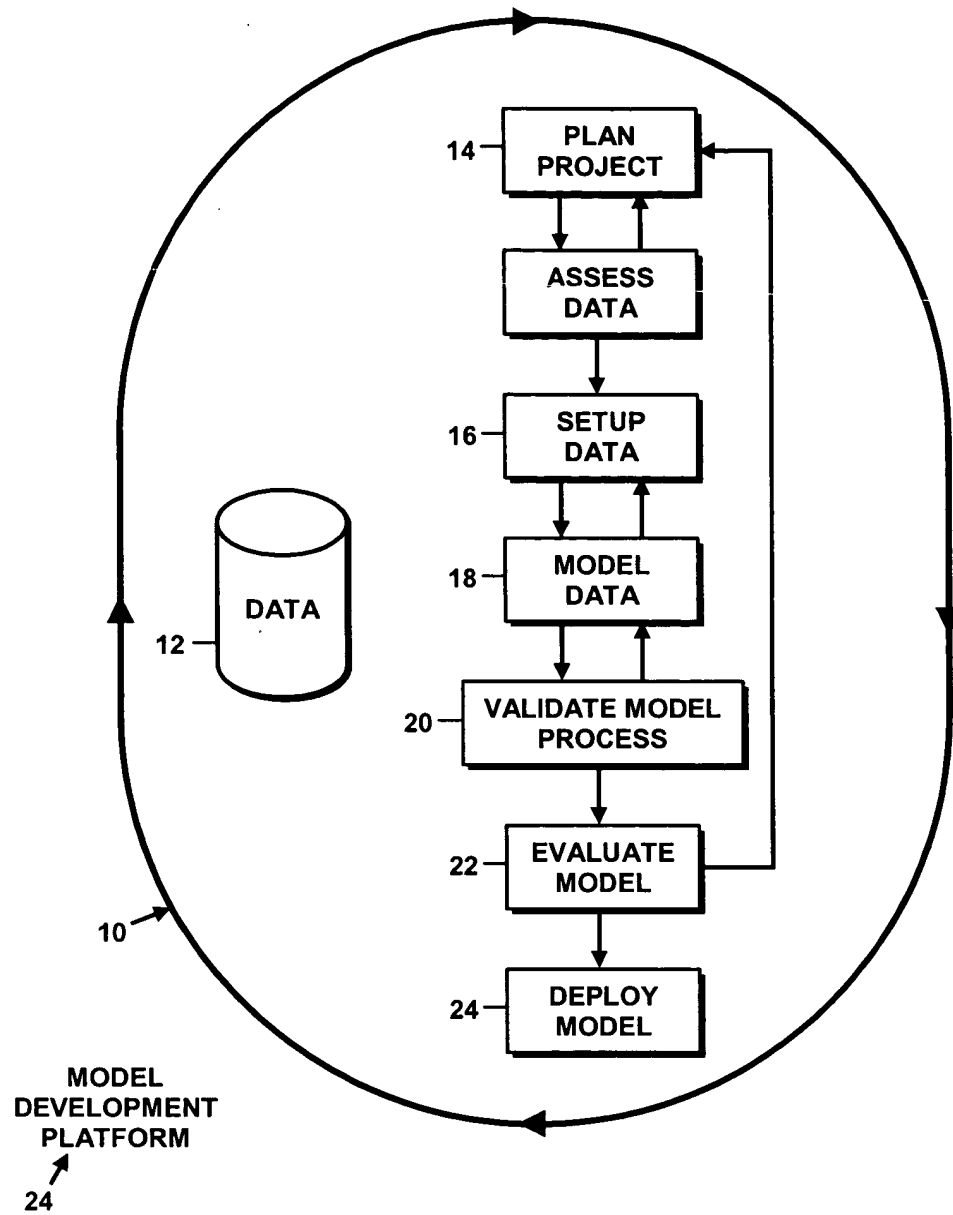


FIG. 1

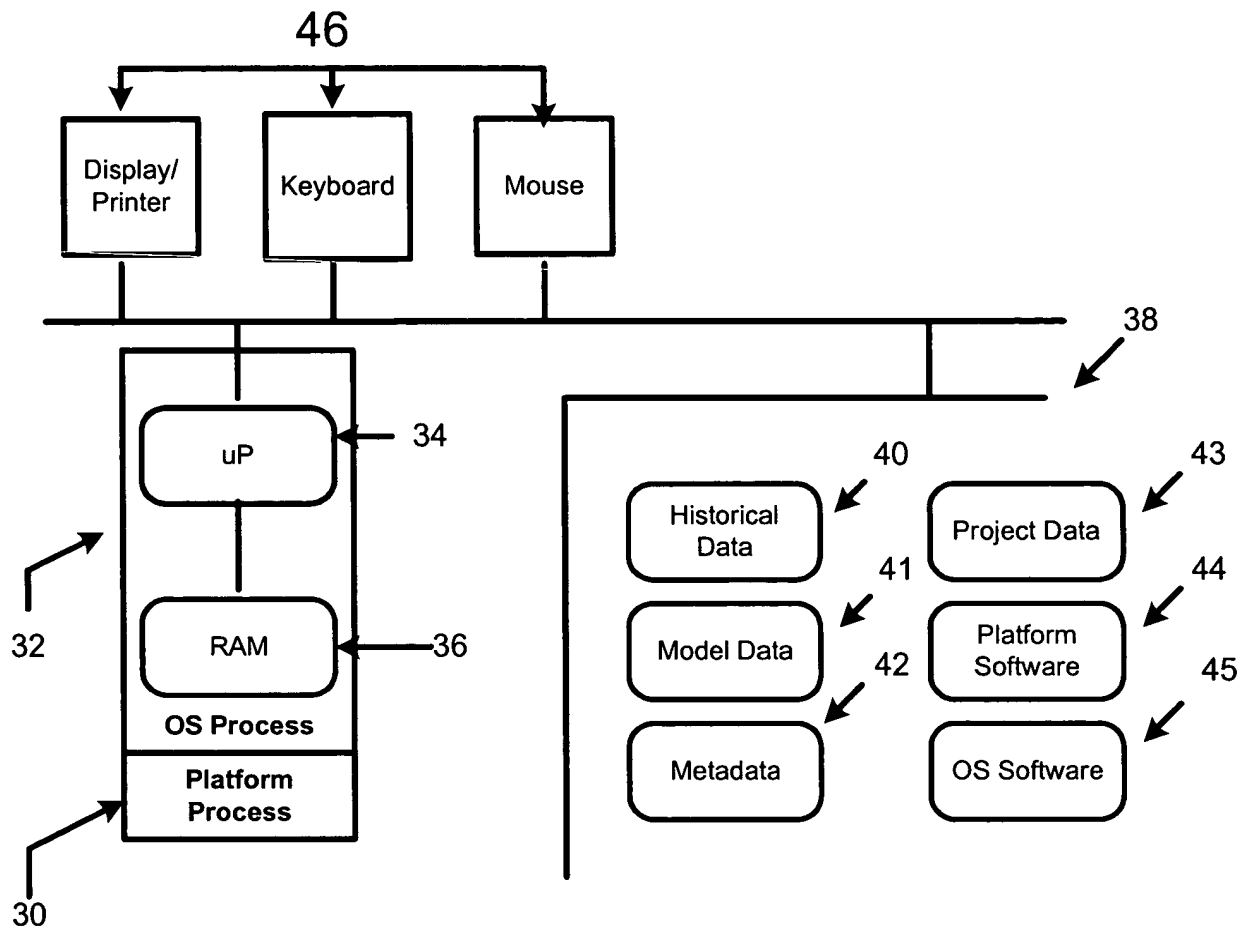


FIGURE 2

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Field Name	Data Type	Description
ProjectID	AutoNumber	Unique Number indexing Model Projects
ProjectName	Text	Reference Name for Model Project
ProjectType	Text	Type of Model to be constructed (Response, Clone, Suppression, ....)
ProjectGoal	Text	Analyst-defined goal for current Model Project
ProjectBeginDate	Date/Time	Identifying Time Stamp for first use
ProjectEndDate	Date/Time	Last used Time Stamp
ProjectDataset	Text	Full pathname reference to Development dataset
ProjectDataDictionary	Text	Full pathname reference to metadata and Model status and data
ProjectLog	Text	Full pathname reference to log of Analyst decisions
DependentVariable	Text	Target variable selected for Model
ModelFitnessCriterion	Number	Desired c-index for Model set by Analyst
ModelPerformanceCriterion	Number	Desired zone of positive Model Gain set by Client
ModelPerformanceMonotonicityCriterion	Number	Desired level of Monotonicity
DevelopmentDatasetSize	Number	Total number of records in Development Dataset
PositiveOutcomes(%)	Number	Number of successful outcomes as a percent of Development Dataset Size
SampleSize(%)	Number	Size of Training Sample as a percent of total Development Dataset Size used for Candidate Model
VariableCount	Number	Initial Number of Predictor Variables
SampleDistribution	Hyperlink	Distribution of Predictor Variables: Graphs and Statistics
SampleByDistribution	Hyperlink	Distribution of Predictor Variables for Positive and Negative Outcomes
Interaction Tree	Hyperlink	Cross-validated Partition Tree for Key Predictor Variables
DimensionReductionMissingFilter	Number	Number of Predictor Variables Eliminated for Missing Variables
DimensionReductionCutoff	Number	Cutoff set by Analyst for Percent of Missing Values Acceptable
DimensionReductionMainEffects	Number	Number of Predictor Variables Retained for Main Effects
DimensionReductionMainEffectsCutoff	Number	Cutoff set by Analyst for Significance of Main Effects
DimensionReductionInteractionEffects	Number	Number of Predictor Variables Retained for Interaction Effects
DimensionReductionInteractionEffectsCutoff	Number	Cutoff set by Analyst for Significance of Interaction Effects
DimensionReductionVariableCount	Number	Number of Predictor Variables resulting from Dimension Reduction
CandidateModelChoice	Text	Model Type applied to Dimension Reduced Dataset
CandidateModelChoiceConstraint	Number	Retention Cutoff or Significance Level for Model Variables
CandidateModelResults	Hyperlink	Model Fitting Results
CandidateModelLiftChart	Hyperlink	Model Non-cumulative Lift Chart
CandidateModelPersistenceChart	Hyperlink	Model Persistence Chart for Key Variables
ValidationMethod	Text	Method Selected for Model Development Process Validation
ValidationMethodResults	Hyperlink	Model Application to Validation Dataset(s) Results
ValidationMethodLiftChart	Hyperlink	Model Validation Lift Chart
FinalModelResults	Hyperlink	Model Development Process applied to full Development Dataset Results
FinalModelLiftChartComparison	Hyperlink	Final Model applied to Sample and Validation Datasets for Cumulative Lift
FinalModelNonCumulativeLiftChartComparison	Hyperlink	Final Model applied to Sample and Validation Datasets for Non-cumulative Lift
FinalModelEquation	Text	Model Parameterized Equation using Model Transformed Variables
ScoringDataset	Text	Full pathname reference to Scoring File Input Dataset
DevelopmentScoringComparison	Hyperlink	Key Variable Comparison on Decile Basis
DevelopmentScoringDistributionComparison	Hyperlink	Propensity Score Distribution for Development and Scoring File (Subset)
ScoredResults	Text	Full pathname reference to Scoring File Output Dataset
InsightProfileMethod	Text	Method for Ranking Customer Insight Variables
InsightProfile	Hyperlink	Ranked List of Key Variables
InsightProfileChart	Hyperlink	Insight Chart of Key Variable Differential Contribution
FinalReportEntry	Memo	Final Report Description and Comments

FIGURE 3

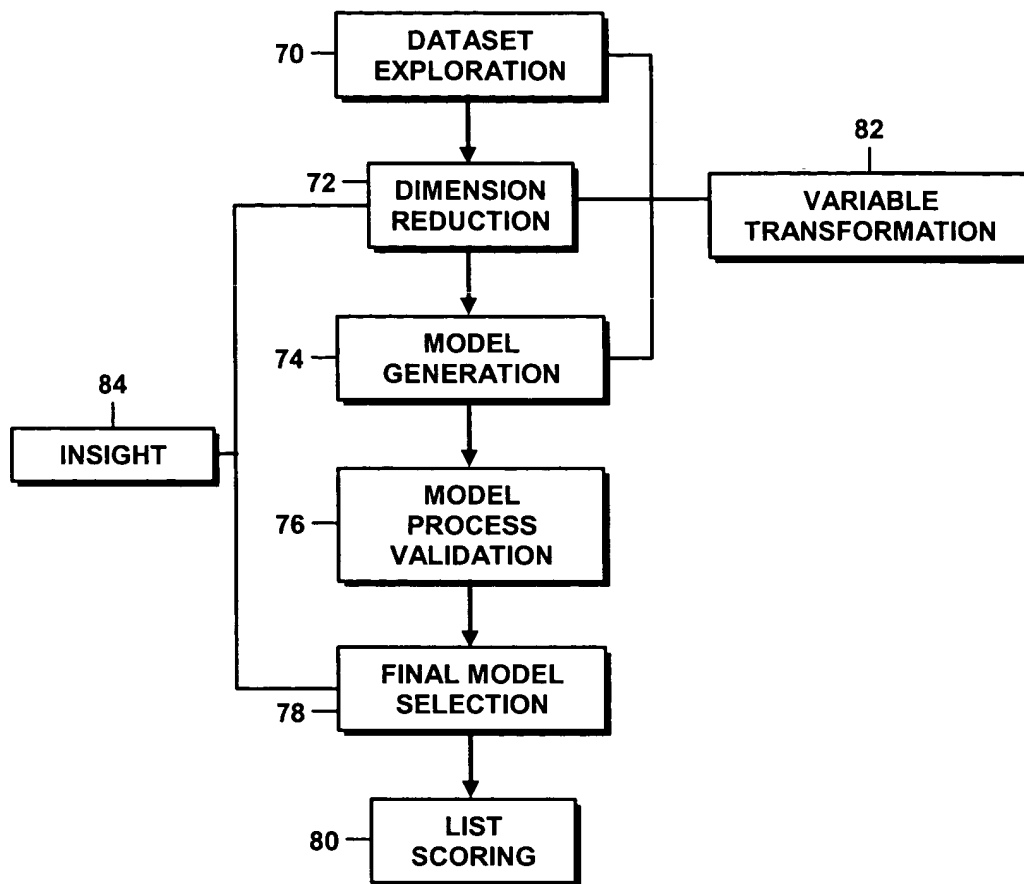


FIG. 4

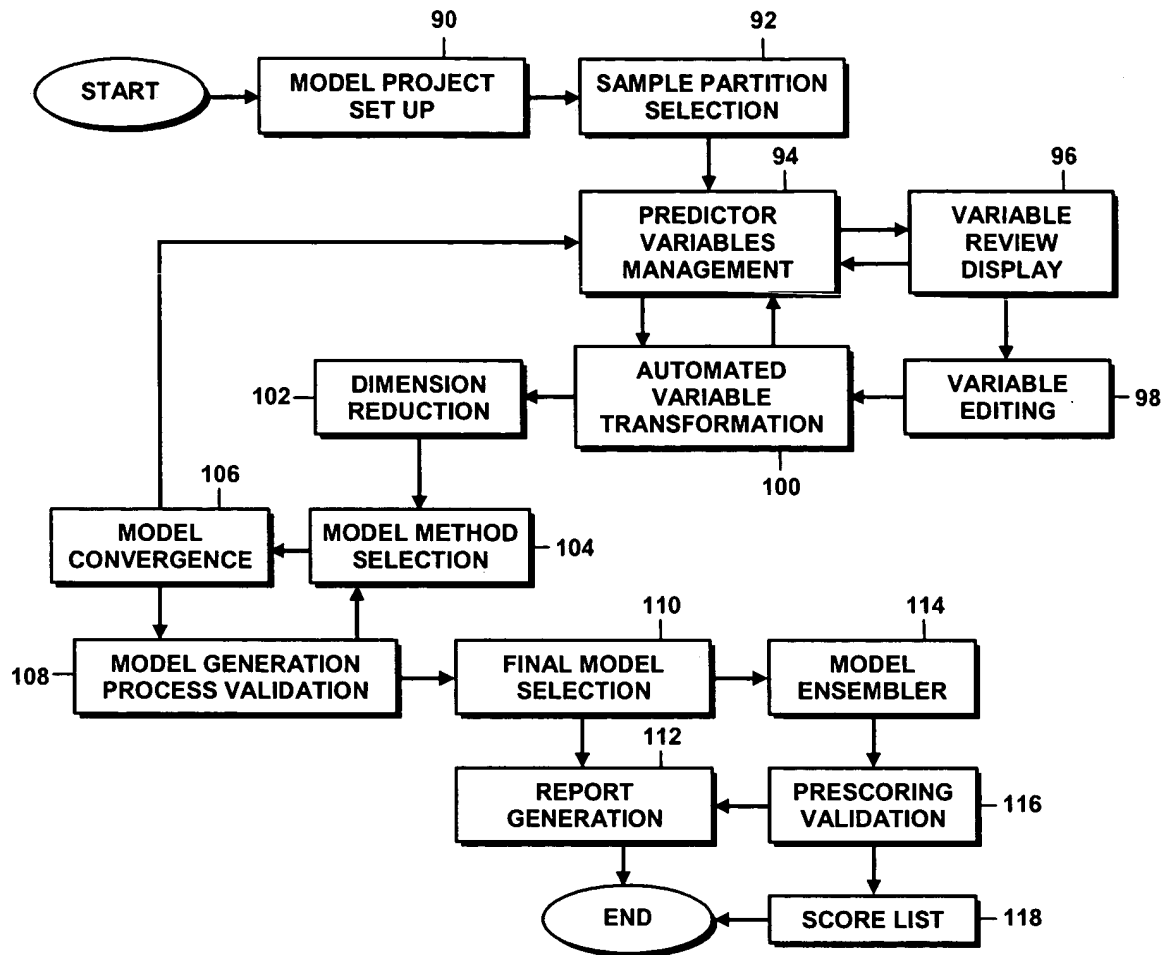
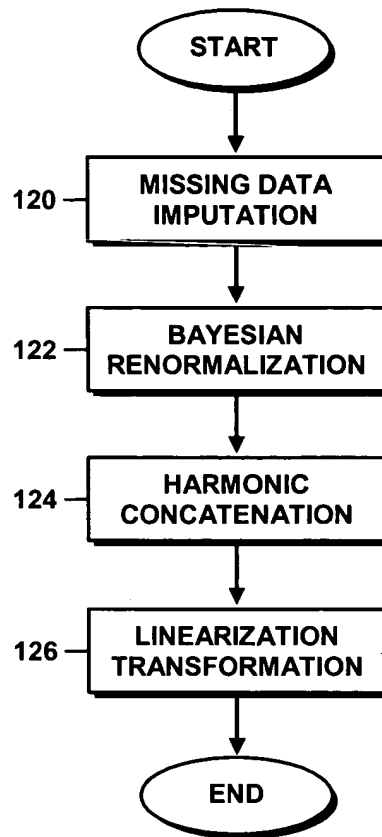
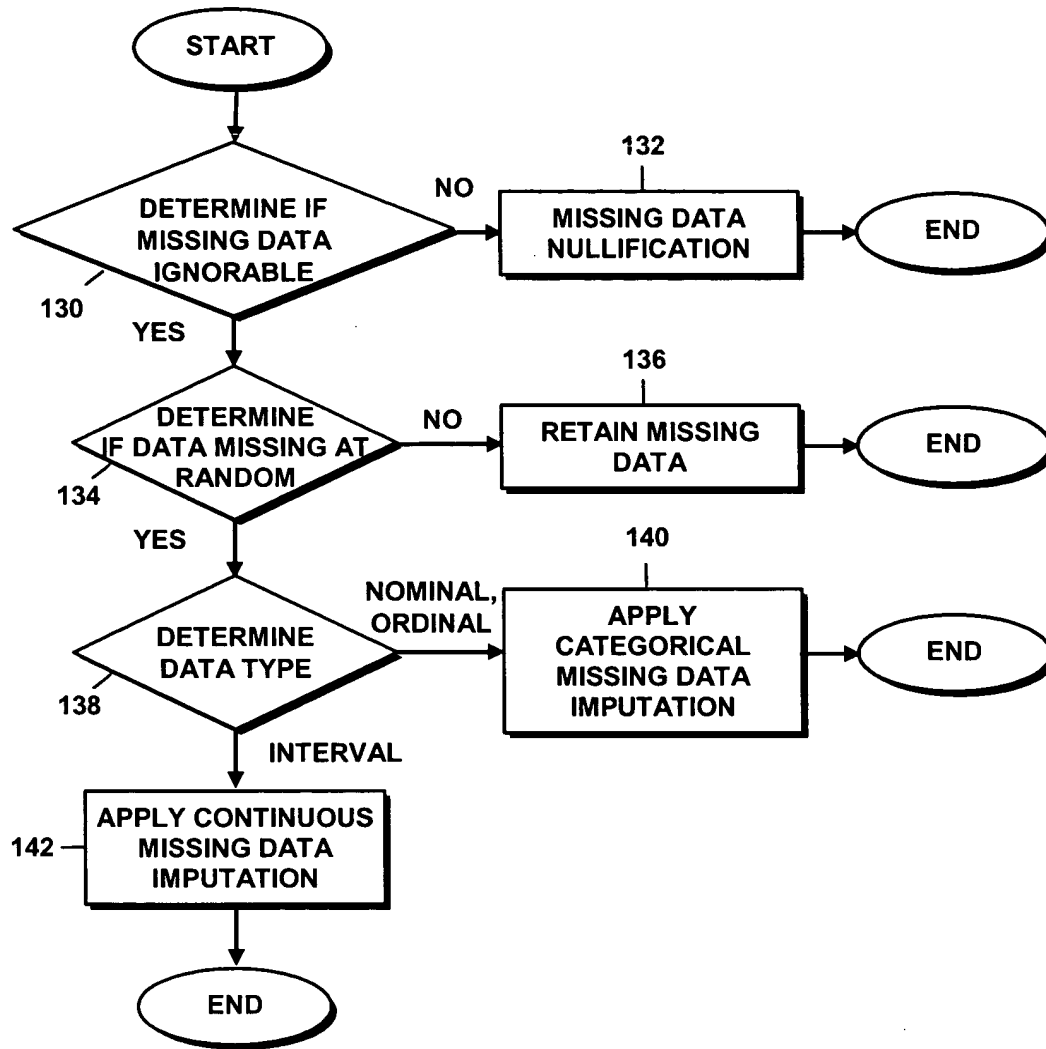


FIG. 5

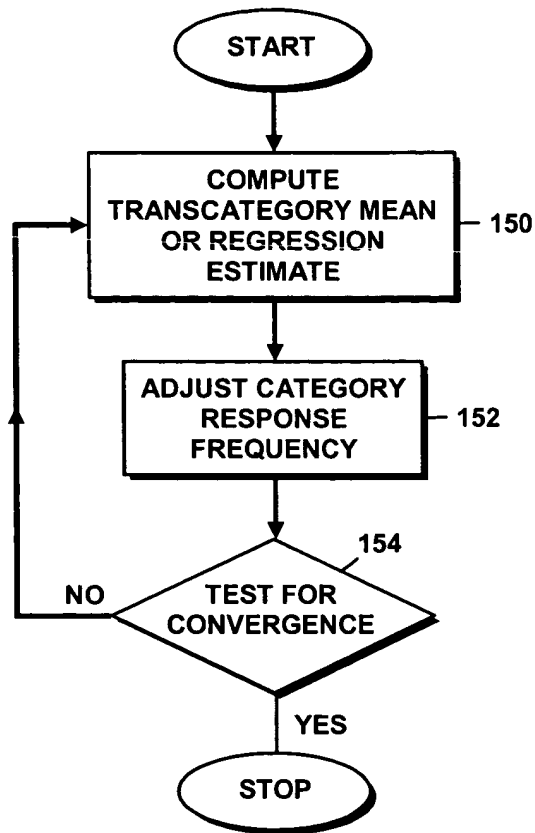


**FIG. 6**

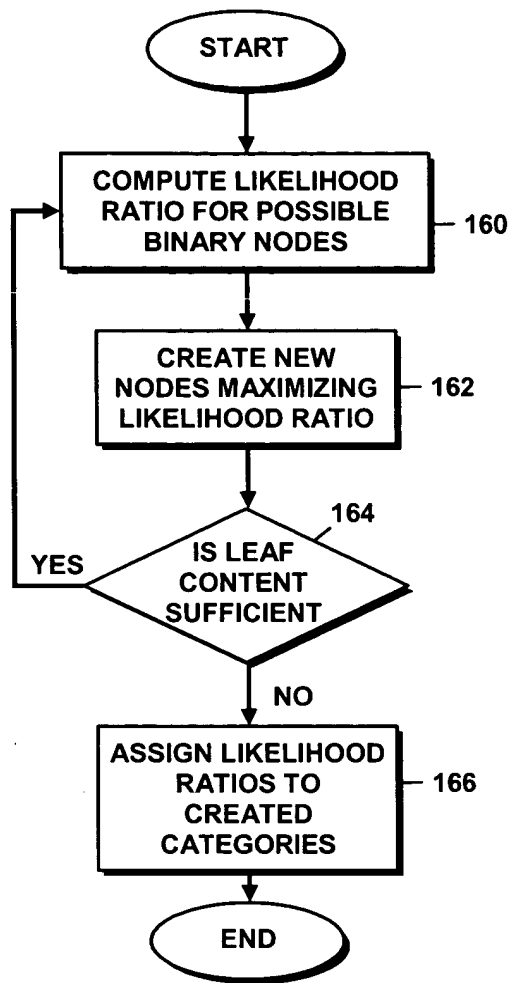


**FIG. 7**





**FIG. 8**



**FIG. 9**

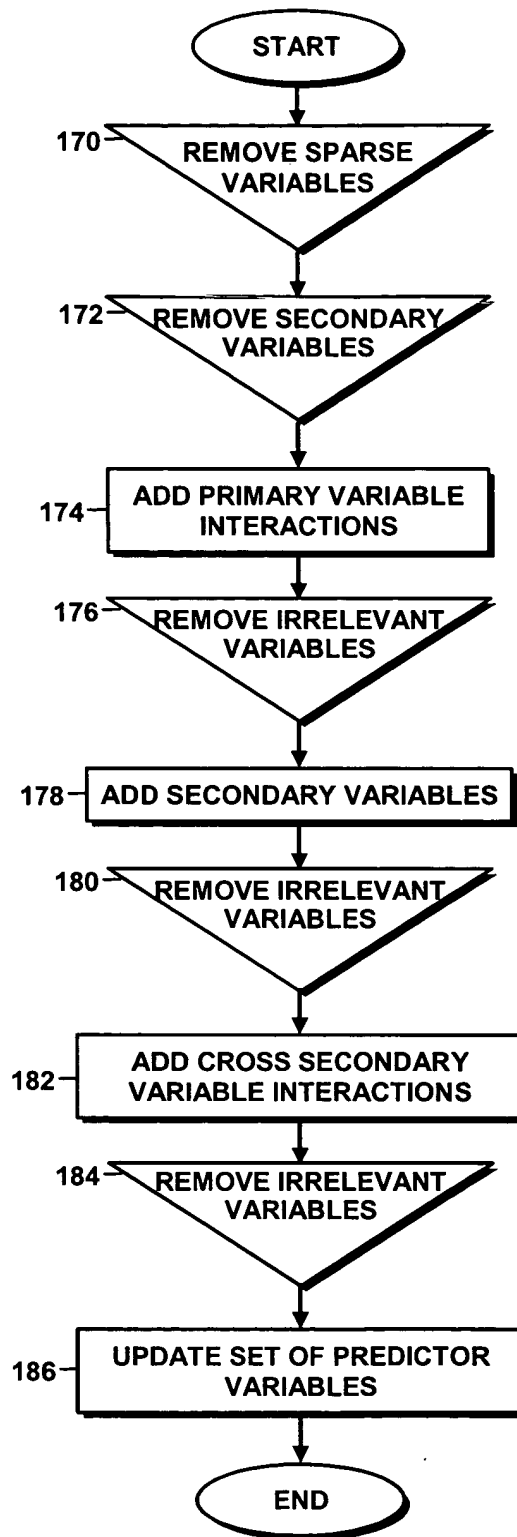


FIG. 10

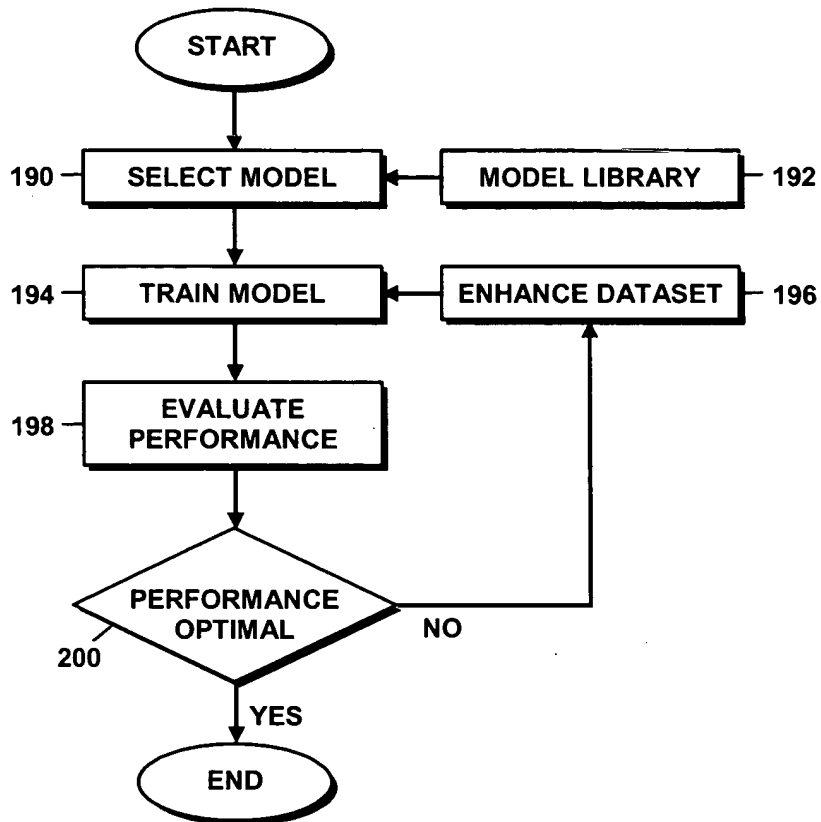
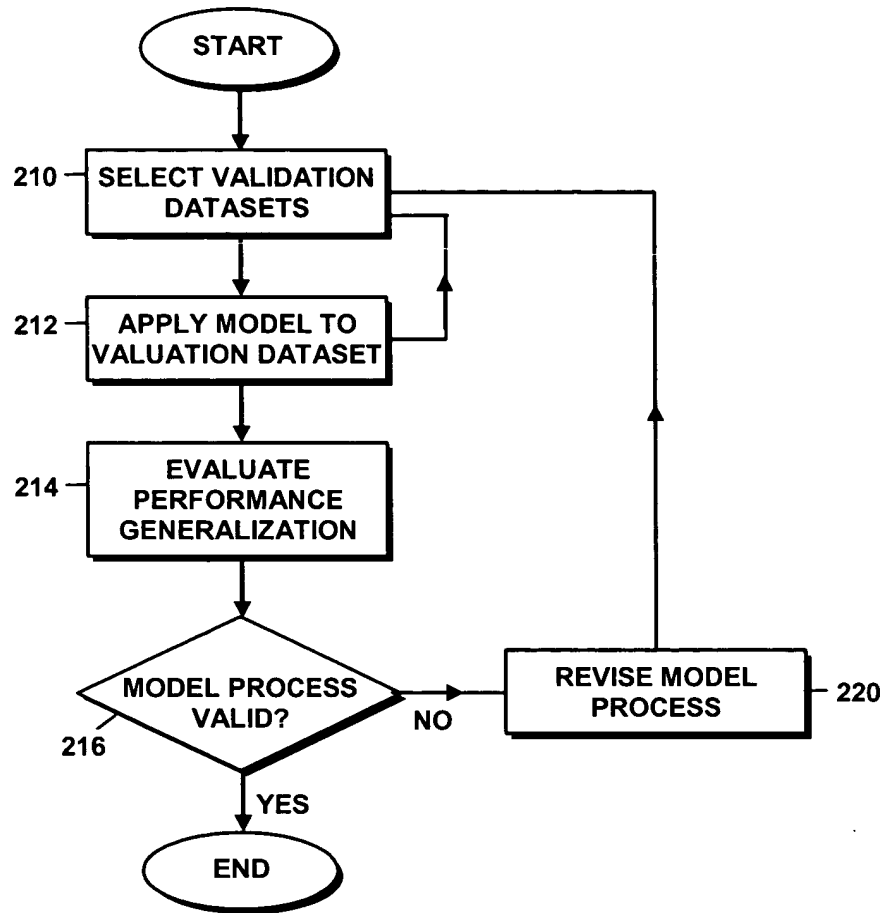
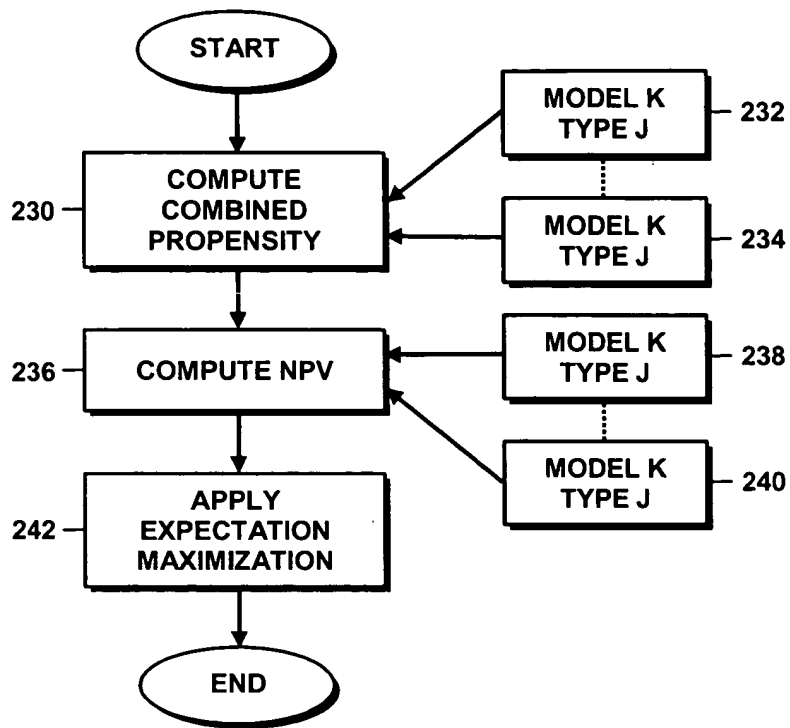


FIG. 11



**FIG. 12**



**FIG. 13**

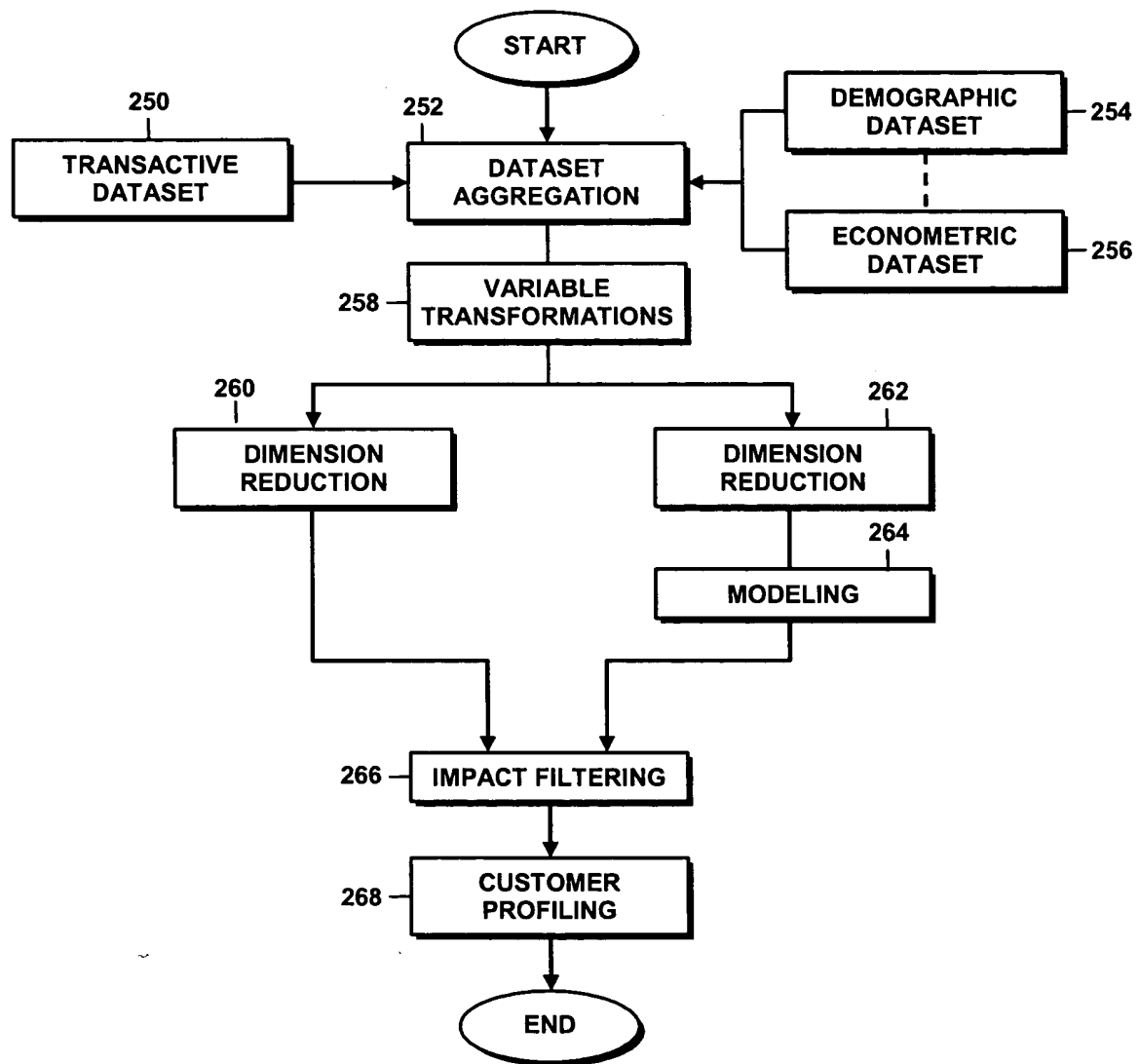
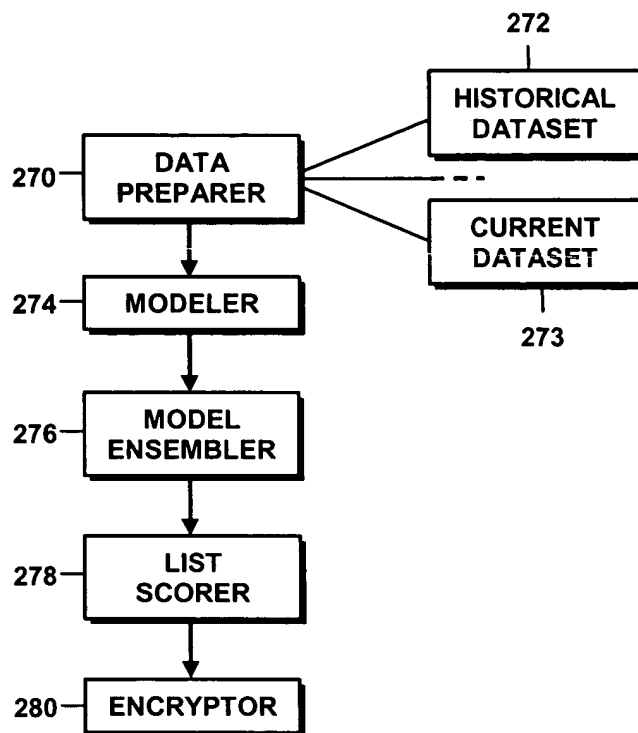


FIG. 14



**FIG. 15**



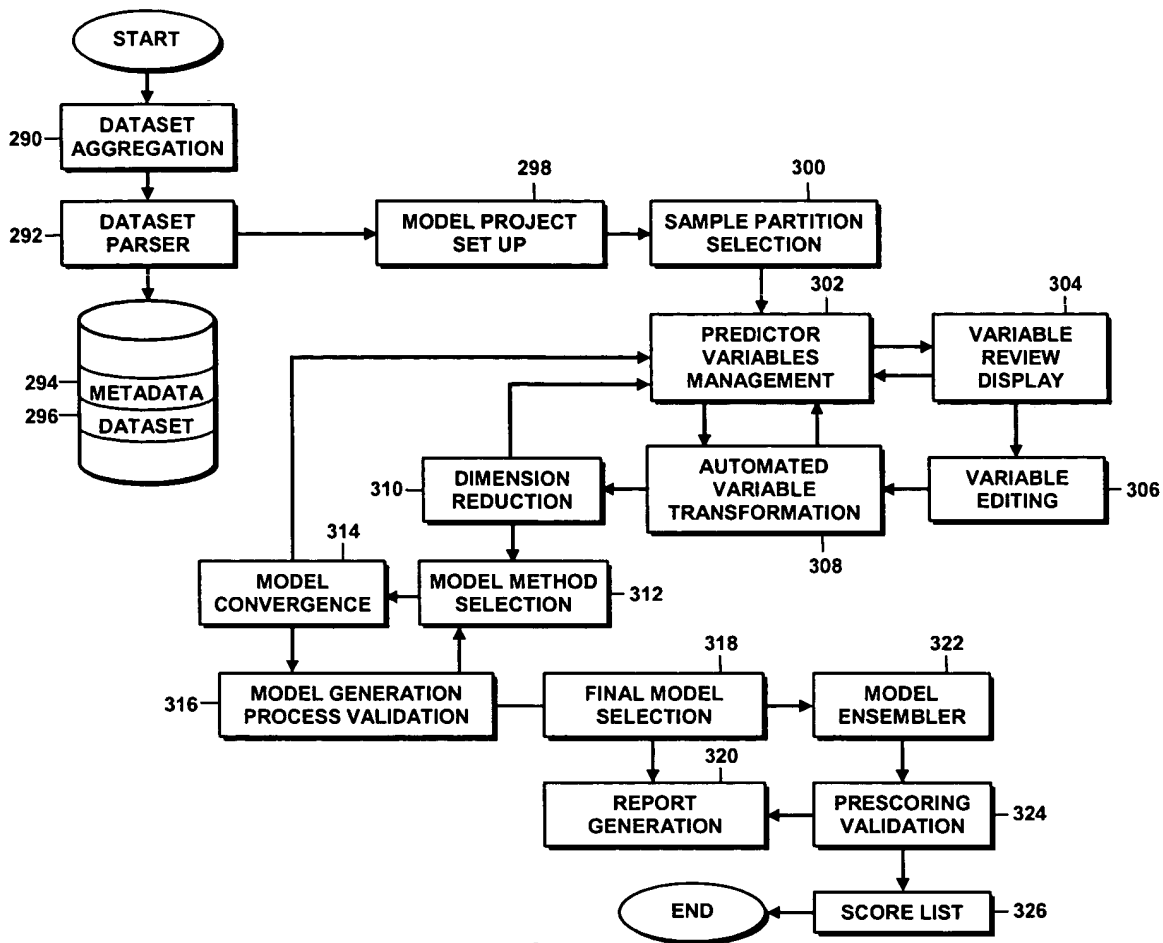


FIG. 16

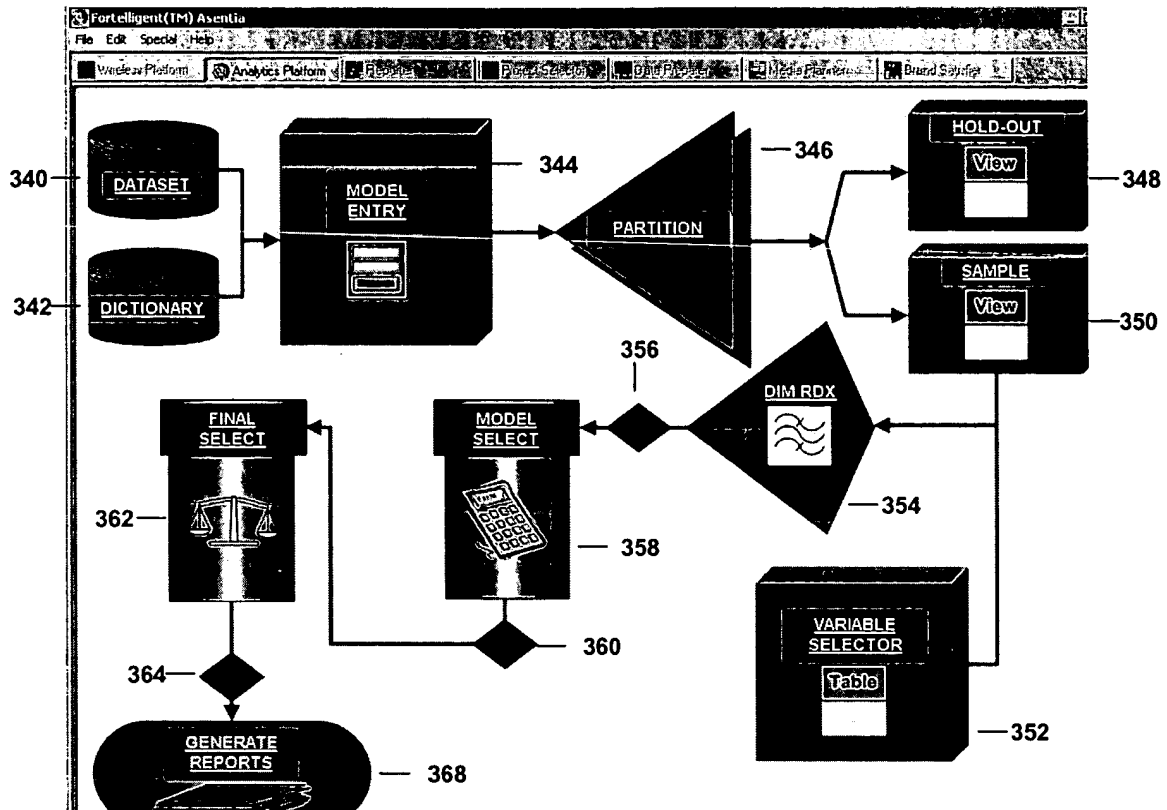


FIG. 17

**Model Project Entry Form**

Model Name:  Model Type:

Model Project Goal or Scope:

370 Browse Datasource:

372 Browse Dictionary:

Dependent Variable (Y):  374

Candidate Model Properties: Success criterion (c >):  Success criterion (KS >):

Model Constraints: Penetration Depth (%):  ☒ Monotone Lift Required ☒ Impute Missing Values

Model Regressor Variables:

Variable	Variable Description
CustomerID	Identification Number for Customer
Current_purchase	Made a purchase in current campaign
Recent_purchase	Recently purchased
Recently_contacted	Contacted within last 8 months
Very_recently_contacted	Contacted within last 30 days
Prior_contact_before_purchase1	Contacted before purchase of first kind
Prior_contact_before_purchase2	Contacted before purchase of second kind
Prior_purchase1	Purchase of first kind in recent campaign
Prior_purchase2	Purchase of second kind in recent campaign
No_recent_purchase1	No purchase of first kind in recent campaign
Regional_group1	located in Zone 1

376 Submit

FIG. 18A

DataDictionary : Table					
	Variable	Variable Type	Variable Description	Variable Definition	Status
	CustomerID	N	Identification Number for Customer	CustomerID	XP
	Current_purchase	N	Made a purchase in current campaign	Current_purchase	P
	Recent_purchase	N	Recently purchased	Recent_purchase	P
	Recently_contacted	N	Contacted within last 8 months	Recently_contacted	P
	Very_recently_contacted	N	Contacted within last 30 days	Very_recently_contacted	P

FIG. 18B

Predictor Variables Palette

Excluded Constructed Variables

Predictor Variables

Recent\_purchase  
Recently\_contacted  
Prior\_contact\_before\_purchase  
Prior\_contact\_before\_purchase  
Prior\_purchase1  
Prior\_purchase2  
No\_recent\_purchase1  
Regional\_group6

Excluded Primary Variables

CustomerID  
Current\_purchase  
Very\_recently\_contacted  
Regional\_group1  
Regional\_group2  
Regional\_group3  
Regional\_group4  
Regional\_group5

Variable Editor

Variable	Definition
Recent_purchase	Recent_purchase
Recently purchased	
Description	
<div> <div>Edit</div> <div>Save</div> <div>Clear</div> </div> <div> <div>Log</div> <div>Square</div> <div>SQRT</div> <div>(X)</div> <div>If any of</div> </div>	
Analyze Predictor Variables	<div> <div>Miss</div> <div>Option</div> <div>Sum</div> <div>Spline</div> <div>Aggregate</div> </div>

☒ Interaction Tree: Buyers vs. Non-buyers

Reduce Dimensions

Reconsider Model

FIG. 19.

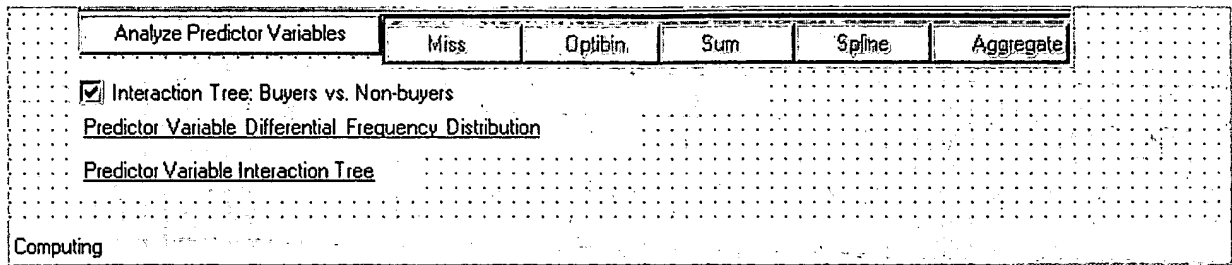


FIG. 20A

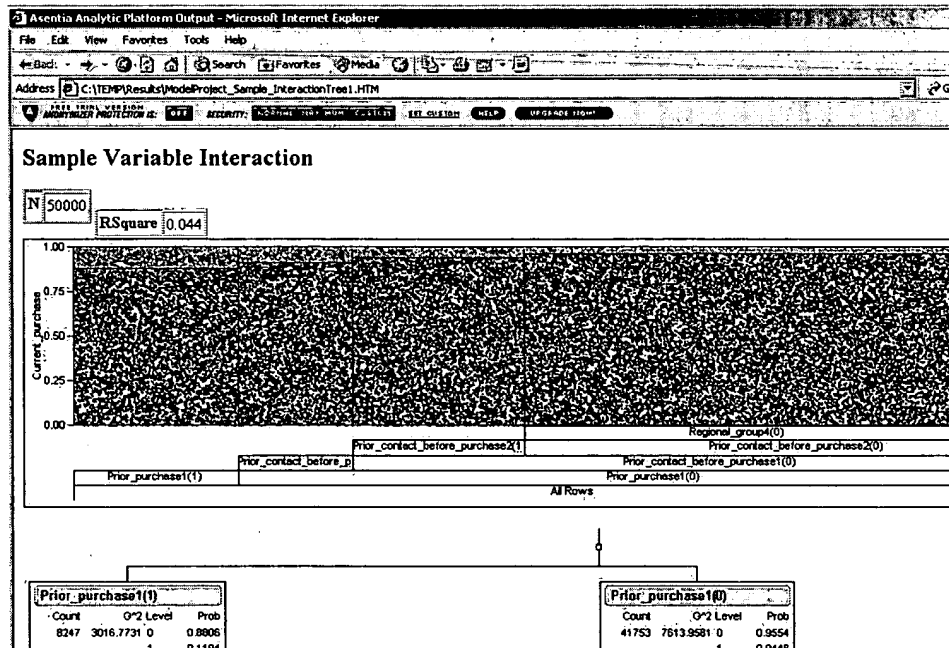


FIG. 20B

Variable Editor	
Variable	Definition
Recent_purchase	Recent_purchase
Description	
Recently purchased	
<div> <div>Edit</div> <div>Save</div> <div>Clear</div> </div>	<div> <div>Log</div> <div>Square</div> <div>SQRT</div> <div>(X)</div> <div>If a &lt; X...</div> </div>
<div> <div>Miss</div> <div>Optimize</div> <div>Sum</div> </div>	

FIG. 21A

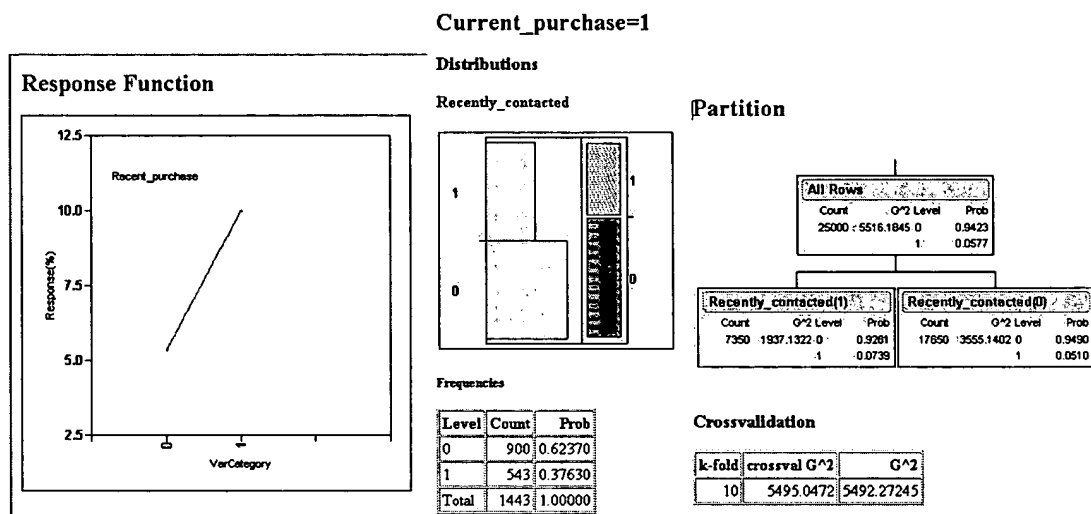


FIG. 21B

Variable Editor	
Variable	Definition
Prior_purchase1_1	Prior_purchase1*
Description	
Purchase of first kind in recent campaign	
<div> <div>Edit</div> <div>Save</div> <div>Clear</div> </div>	<div> <div>Log</div> <div>Square</div> <div>SQRT</div> <div>(X)</div> </div>

FIG. 21C

Variable Editor	
Variable	Definition
Prior_purchase1_1	Prior_purchase1*Prior_contact_before_purchase1
Description	
Purchase of first kind in recent campaign AND Contacted before purchase of first kind	
<div> <div>Edit</div> <div>Save</div> <div>Clear</div> <div>Log</div> <div>Square</div> <div>SQRT</div> <div>(X)</div> </div>	

FIG. 21D

Variable Editor

Variable	Definition
Prior_purchase1_I	Prior_purchase1 * Prior_contact_before_purchase1

Description  
Purchase of first kind in recent campaign AND Contacted before purchase of first kind

Edit Save Clear Log Square SORT (X)

Revisit Reduction

Cancel

FIG. 21E

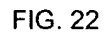
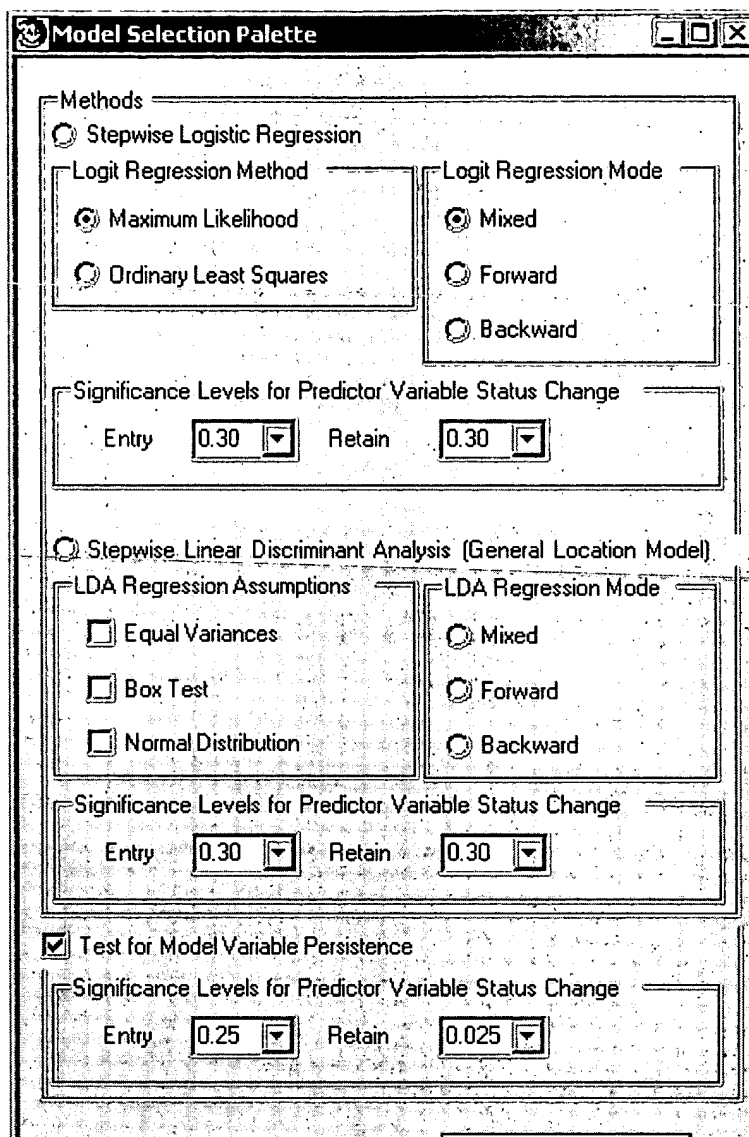


FIG. 22





The image shows a software dialog box titled "Model Selection Palette". It contains three main sections for different statistical methods. The first section, "Stepwise Logistic Regression", has a "Logit Regression Method" group with "Maximum Likelihood" selected and "Ordinary Least Squares" unselected. The "Logit Regression Mode" group has "Mixed" selected, with "Forward" and "Backward" unselected. Below this is a "Significance Levels for Predictor Variable Status Change" section with "Entry" and "Retain" both set to 0.30. The second section, "Stepwise Linear Discriminant Analysis (General Location Model)", has an "LDA Regression Assumptions" group with "Equal Variances", "Box Test", and "Normal Distribution" all unselected. The "LDA Regression Mode" group has "Mixed", "Forward", and "Backward" all unselected. Below this is another "Significance Levels for Predictor Variable Status Change" section with "Entry" and "Retain" both set to 0.30. The third section, "Test for Model Variable Persistence", is checked and has a "Significance Levels for Predictor Variable Status Change" section with "Entry" set to 0.25 and "Retain" set to 0.025.

**Model Selection Palette**

**Methods**

☐ Stepwise Logistic Regression

Logit Regression Method

☒ Maximum Likelihood

☐ Ordinary Least Squares

Logit Regression Mode

☒ Mixed

☐ Forward

☐ Backward

Significance Levels for Predictor Variable Status Change

Entry: 0.30 Retain: 0.30

☐ Stepwise Linear Discriminant Analysis (General Location Model)

LDA Regression Assumptions

☐ Equal Variances

☐ Box Test

☐ Normal Distribution

LDA Regression Mode

☐ Mixed

☐ Forward

☐ Backward

Significance Levels for Predictor Variable Status Change

Entry: 0.30 Retain: 0.30

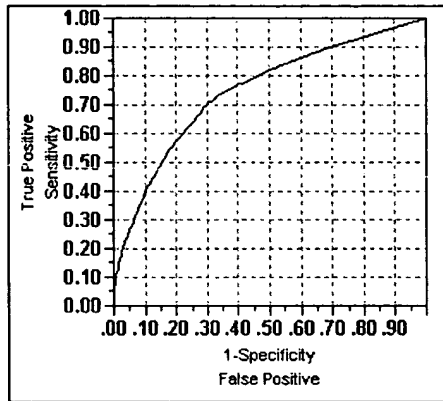
☒ Test for Model Variable Persistence

Significance Levels for Predictor Variable Status Change

Entry: 0.25 Retain: 0.025

FIG. 23A

### Receiver Operating Characteristic



Using Current\_Purchase='1' to be the positive level  
Area Under Curve =  
0.74906

### Model Gains for Sample

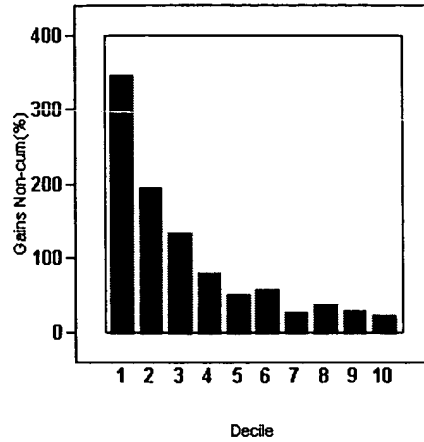


FIG. 23B

### Persistence of Model for Key Predictor Variables

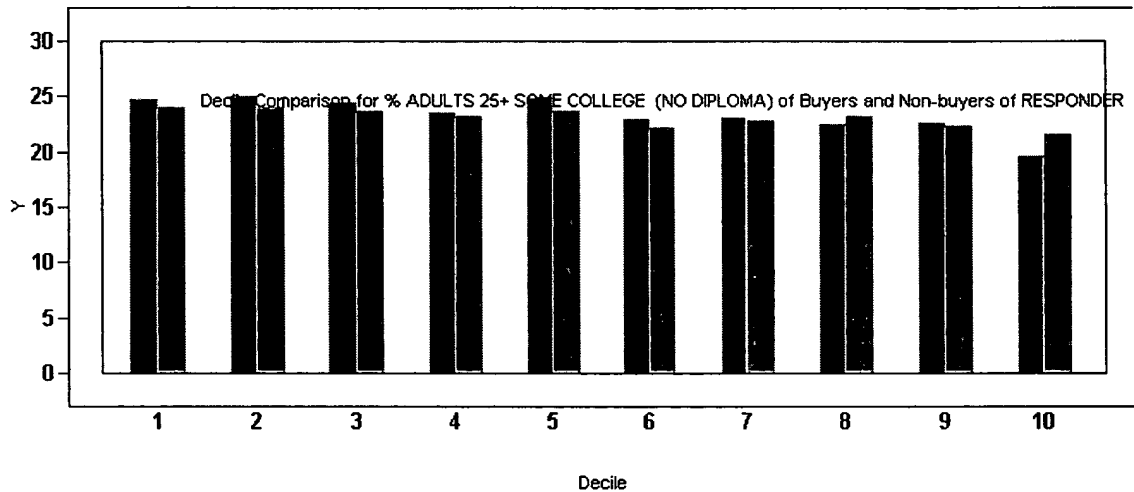


FIG. 23C

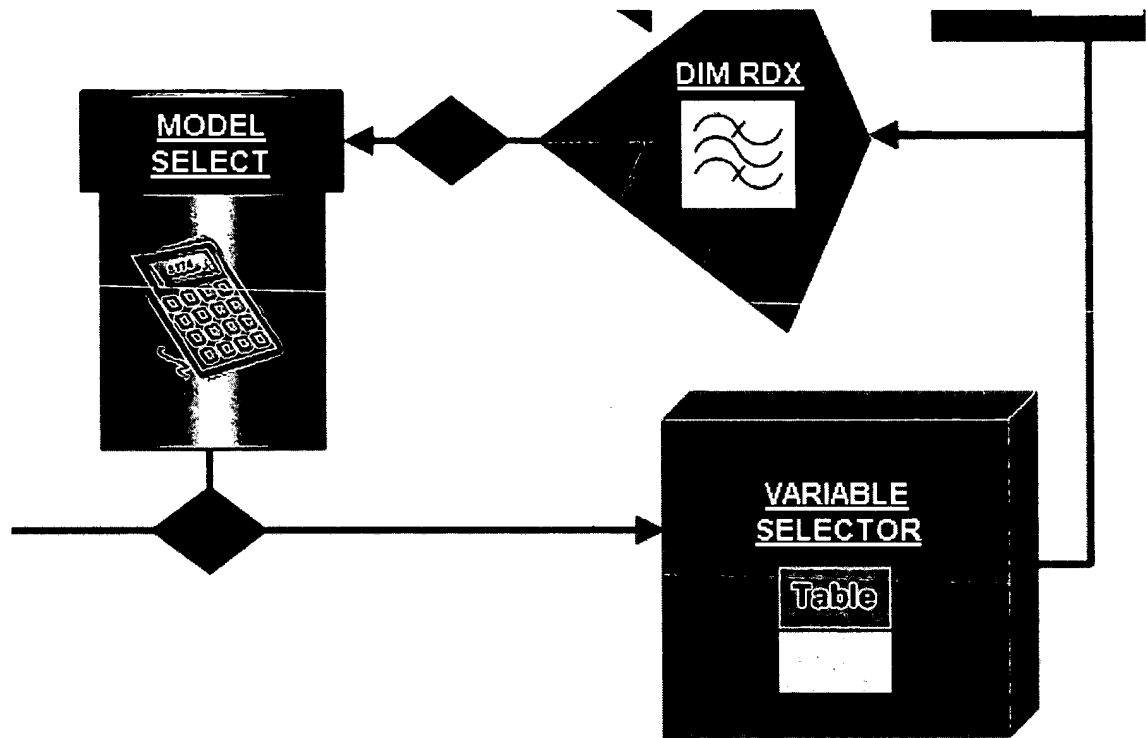


FIG. 24

**Final Model Candidate Selection**

Target Goals for Final Model

Model Project Target c-Statistic: 0.70  
Model Project Target KS-Statistic: 0.25  
Model Project Anticipated Penetration Depth: 40  
Model Project Monotone Lift Expected: Yes

Select Validation Dataset

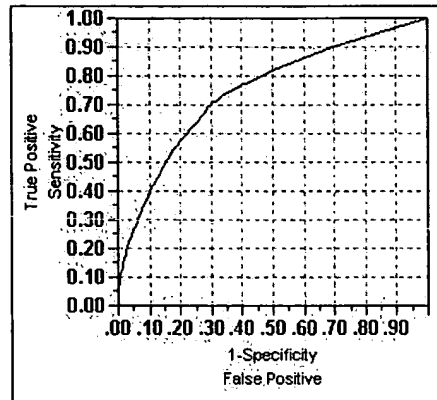
☐ Preselected Sample  
☐ Preselected Sample Complement  
☐ Full Development Dataset [100%]  
☐ Random Sample (%) 0

☒ Model Statistics for Sample vs Validation  
☒ Cumulative Lift of Model versus Baseline  
☒ Non-Cumulative Lift of Model versus Baseline

Validate Model  
Finish Modeling  
Reconsider Model  
Review Predictors

FIG. 25A

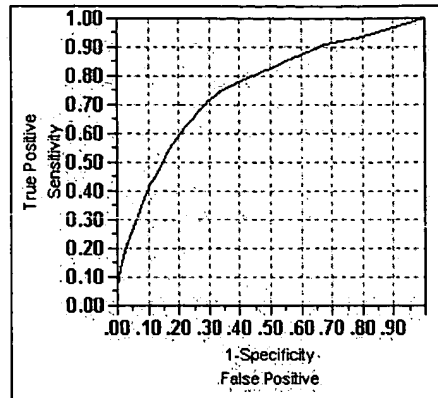
**Receiver Operating Characteristic**



Using Current\_Purchase='1' to be the positive level  
Area Under Curve =  
0.74906

FIG. 25B

### Receiver Operating Characteristic



Using Current\_Purchase='1' to be the positive level  
Area Under Curve =  
0.75884

FIG. 25C



FIG. 26

FIG. 27AFIG. 27B



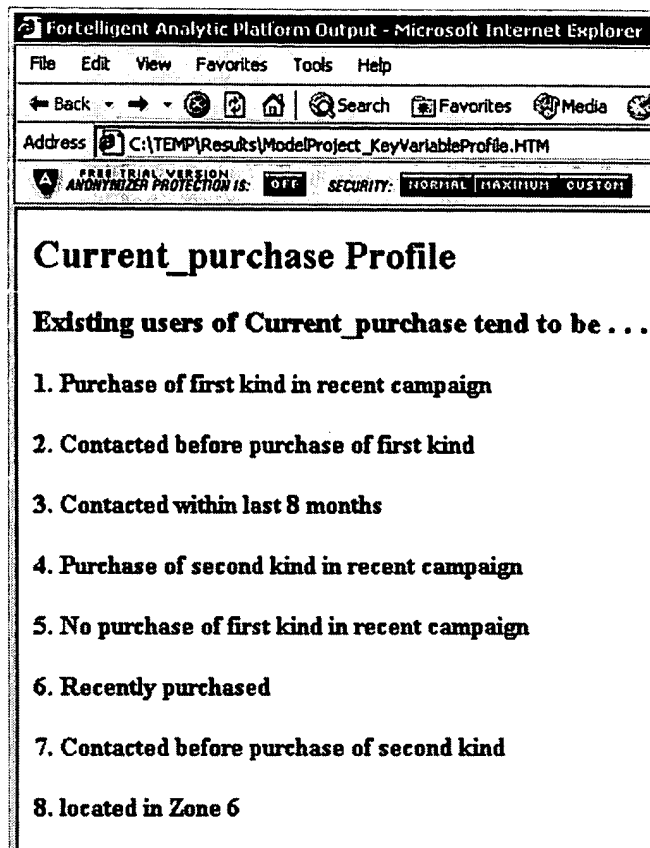


FIG. 27C

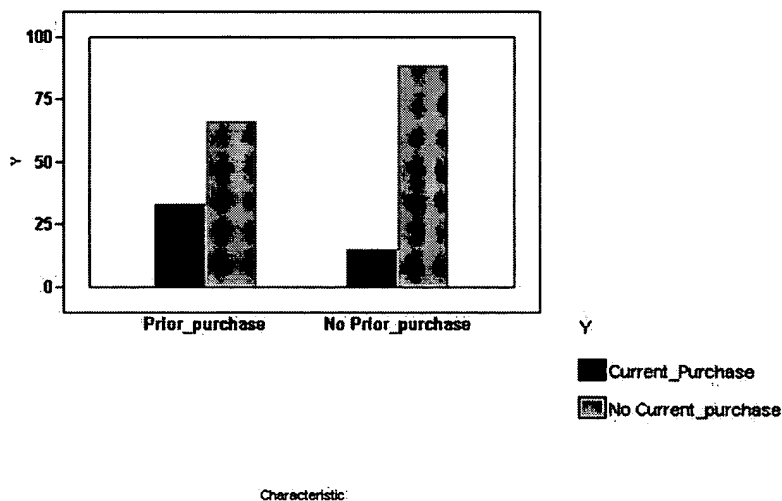


FIG. 27D